

Manufacturing in Missouri:

Skills-Mismatch Index



RESEARCH AND PLANNING
Missouri Department of Economic Development

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I. Overview

The decentralization of the manufacturing sector following World War II created an abundance of jobs across the United States, becoming one of the main economic sectors in the country. However, since the mid-1980s manufacturing has been declining in importance as firms begin to automate production and move operations abroad. Despite these trends, the manufacturing sector still constitutes an important part of local and regional economies in the United States, especially in rural areas. Therefore, it is imperative that policy-makers understand the strengths and weaknesses of their manufacturing base. Given the nature of the global economy, policy-makers need to identify areas of economic comparative advantage that they can build upon; and areas of economic vulnerability that they need to strengthen.

Increasingly, communities are focusing their development efforts at attracting quality jobs, rather than attracting the largest quantity of jobs. Given this preference, the skill level of the workforce is a crucial consideration in determining an economic development strategy. A community's chance of successfully attracting a particular industry rests heavily with the skill base in the community. Different types of manufacturing firms require different labor skills, and will locate to areas that best suit their labor needs. For example, high-skill firms may not locate to areas with a poorly educated workforce since they may have difficulty finding qualified employees. On the other hand, low-skill firms may not locate to areas with a highly educated workforce since they may have to pay higher wages. Successful economic development partly rests with matching an industry's skill demand with the available skill base in the community.

II. Skills-Mismatch Index

One method to measure the disparity between the demand of each skill level of an industry and the supply of each skill level in the local community is by using the Skill-Mismatch Index (SMI). Higher SMI values indicate a greater mismatch of labor force skills for that industry in the county. The SMI can be interpreted in two ways. First, ranking the SMI values for each manufacturing industry within a county provides a form of industry targeting, indicating which industries are best suited to the skill base in the county. Second, SMI values can be used in developing programs that strengthen labor force skills in order to make the area more attractive to selected industries.

The SMI is calculated by taking the difference between the industry skill "demand" minus the county skill "supply". Industry skill demand was defined as the average proportion of high, semi and low skilled workers within an industry

using data from the Occupational Employment Survey, U.S. Department of Labor (DOL). DOLs seven occupational classifications were collapsed into three categories that reflect, as much as possible, the amount of training and education required to perform that occupation. From this, the percentage of workers for each skill level was calculated by industry and was used to represent industry skill demand. County skill supply was determined using educational attainment data from the U.S. Census Bureau. Refer to the Appendix for a list of skill demand for the manufacturing sector.

Skill Level	DOL Occupational Classes	US Census Educational Attainment
High	1 – Professionals, administrators, managers. 2 – Technical workers, middle managers.	Graduate or Professional Degree. Bachelor's Degree.
Semi	3 – Trades people. 4 – Fore people/managers of production.	Associate's Degree. Some college, no degree.
Low	5 – Clerical, administrative workers. 6 – Service workers. 7 – Production, farm, mining, transport workers.	High School Diploma/GED. Less than high school education.

Skill-Mismatch Index (SMI)

$$SMI_{\text{sector}} = \sum_{j=1}^3 (S_j - M_{ij})^2$$

Where:

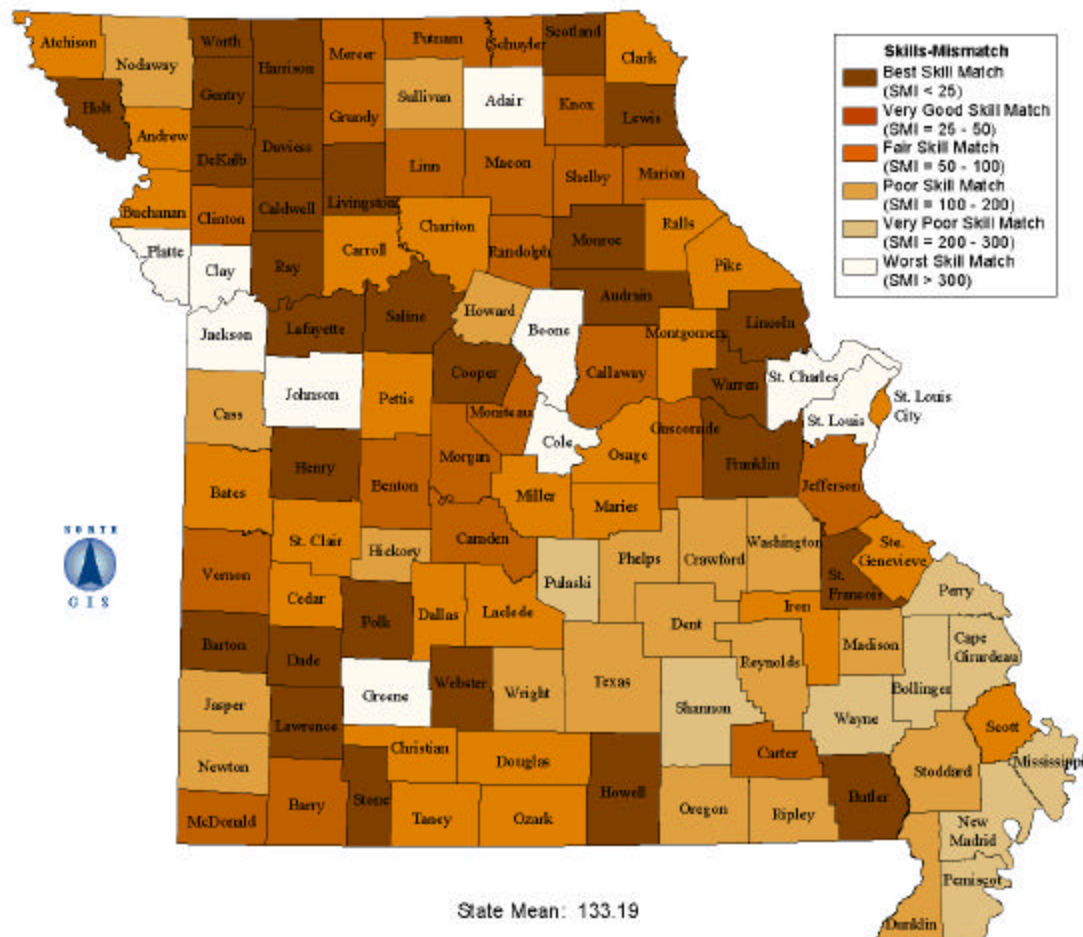
j = Skill Level (1=High, 2=Semi, 3=Low).

S_j = Percent of County Population with Skill Level j .

M_{ij} = Percent of Workers in Industry i with Skill Level j .

The following maps present the SMI for each county, and give some indication as to the national competitiveness of Missouri's labor force skills in the manufacturing sector. It is important to note that a poor skill match does not necessarily mean that the county has poor educational levels. Different types of manufacturing firms require different labor skills, and will locate to areas that best suit their labor needs. For example, high-skill firms may not locate to areas with a poorly educated workforce since they may have difficulty finding qualified employees. On the other hand, low-skill firms may not locate to areas with a highly educated workforce since they may have to pay higher wages.

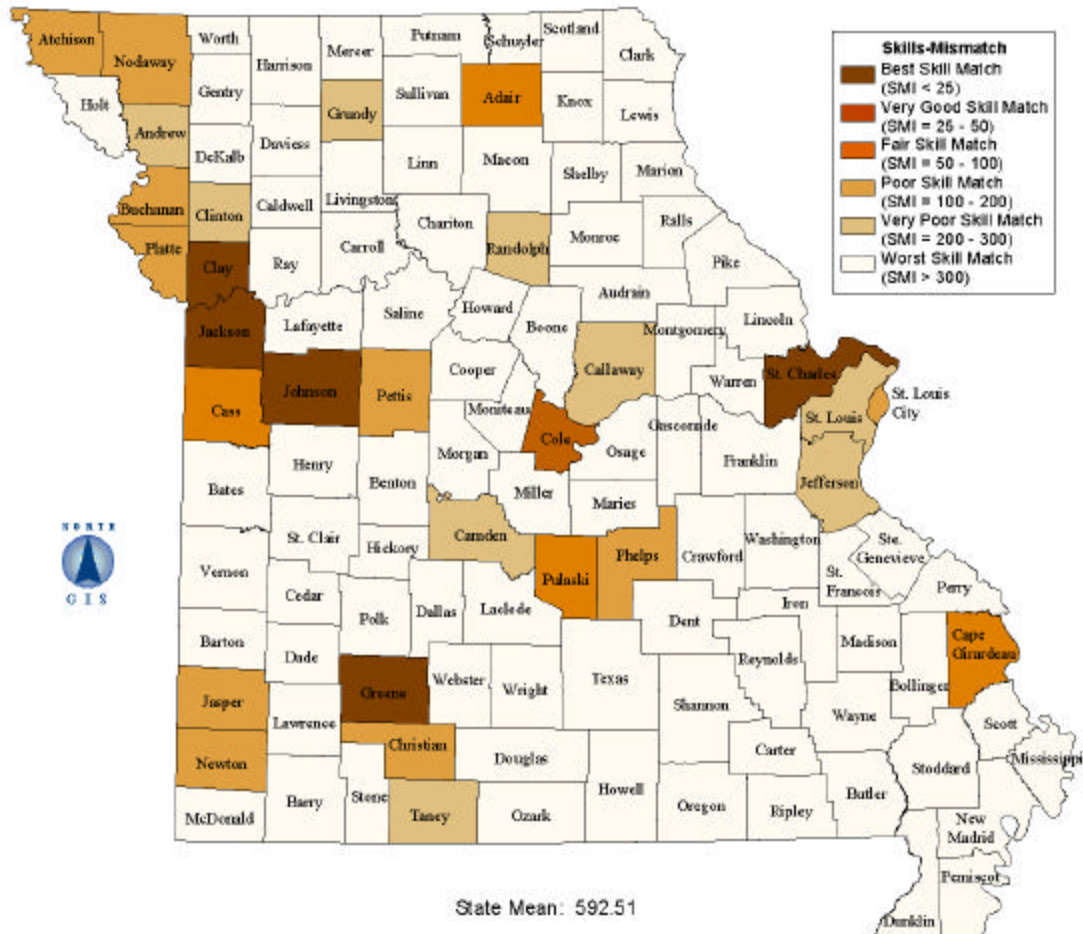
**Manufacturing Skills - Mismatch Index:
SIC20 - Food and Kindred Products**



Data from 1994

Source: U.S. Department of Labor
U.S. Census Bureau

Manufacturing Skills - Mismatch Index: SIC21 - Tobacco Products

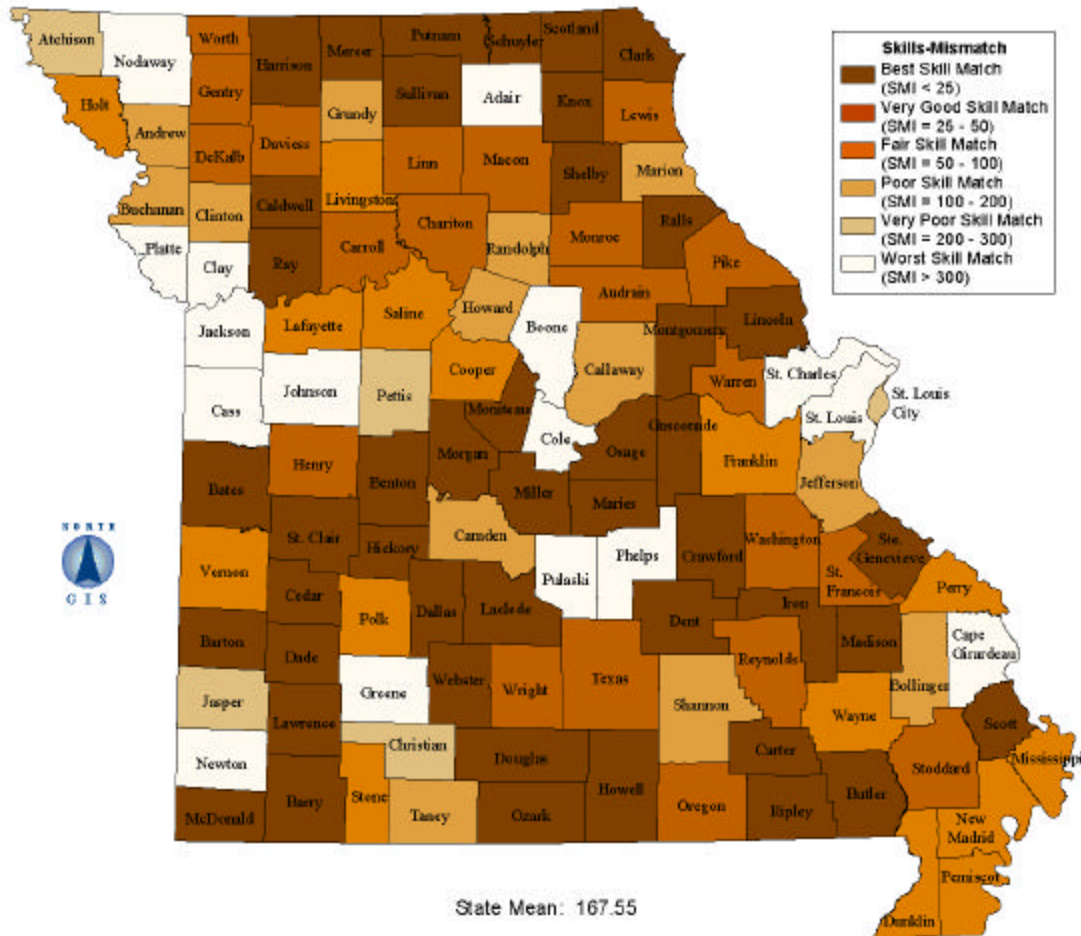


Data from 1994

Source: U.S. Department of Labor
U.S. Census Bureau



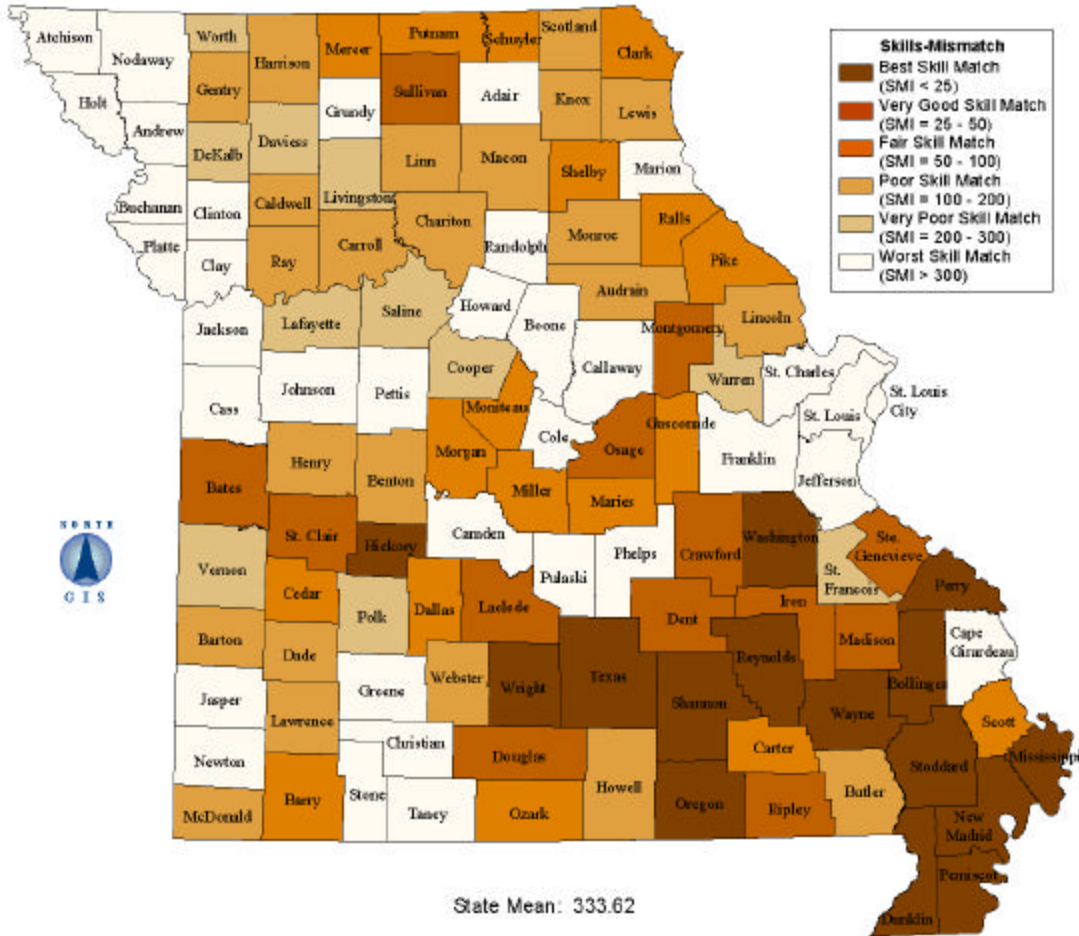
Manufacturing Skills - Mismatch Index: SIC22 - Textile Mill Products



Data from 1994

Source: U.S. Department of Labor
U.S. Census Bureau

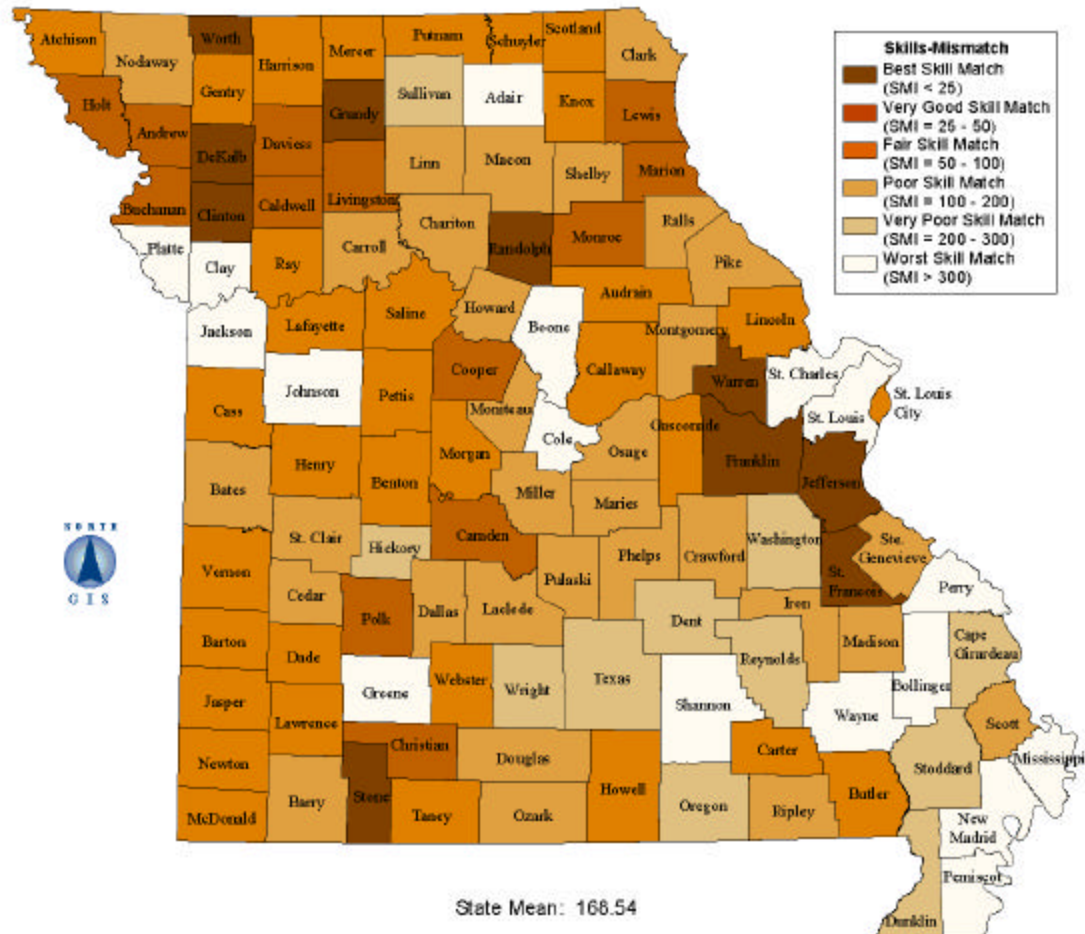
Manufacturing Skills - Mismatch Index:
SIC23 - Apparel and Other Finished Fabric Products



Data from 1994

Source: U.S. Department of Labor
U.S. Census Bureau

Manufacturing Skills - Mismatch Index: SIC24 - Lumber and Wood Products

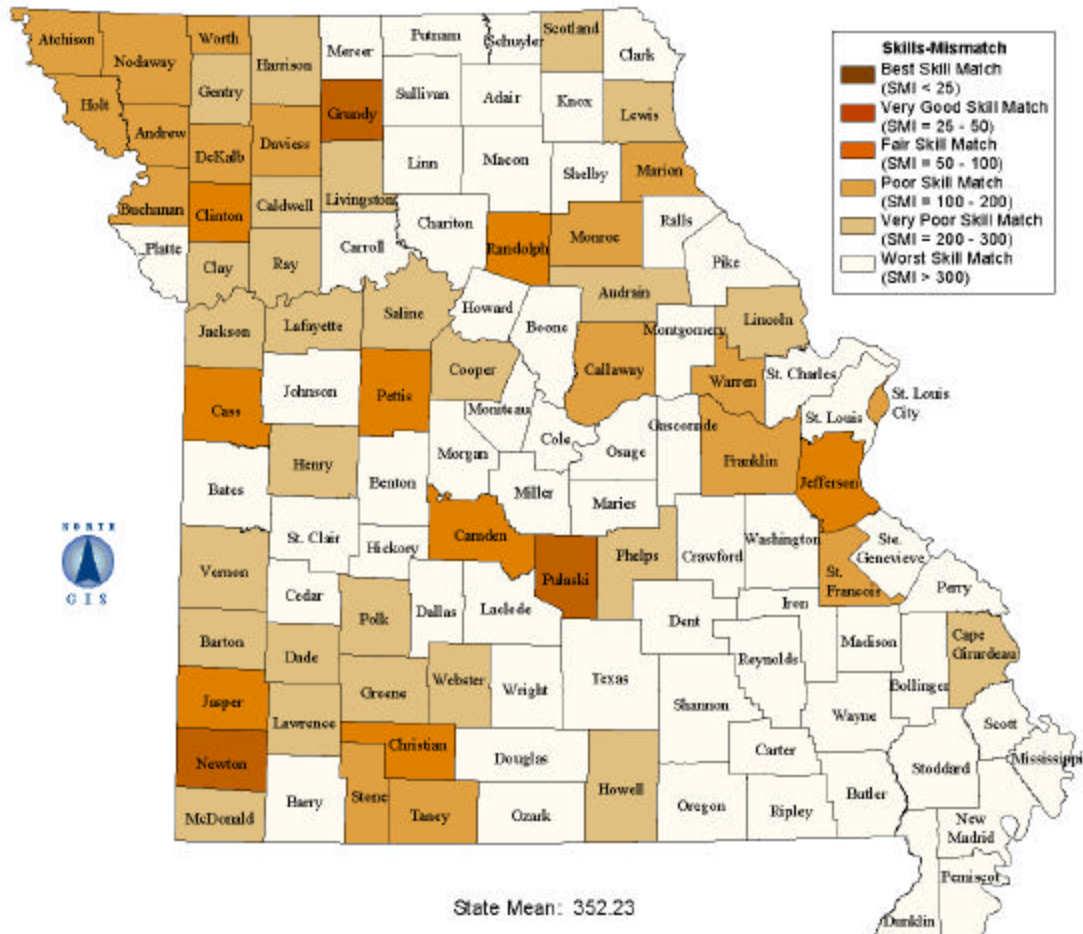


Data from 1994

Source: U.S. Department of Labor
U.S. Census Bureau



Manufacturing Skills - Mismatch Index: SIC25 - Furniture and Fixtures

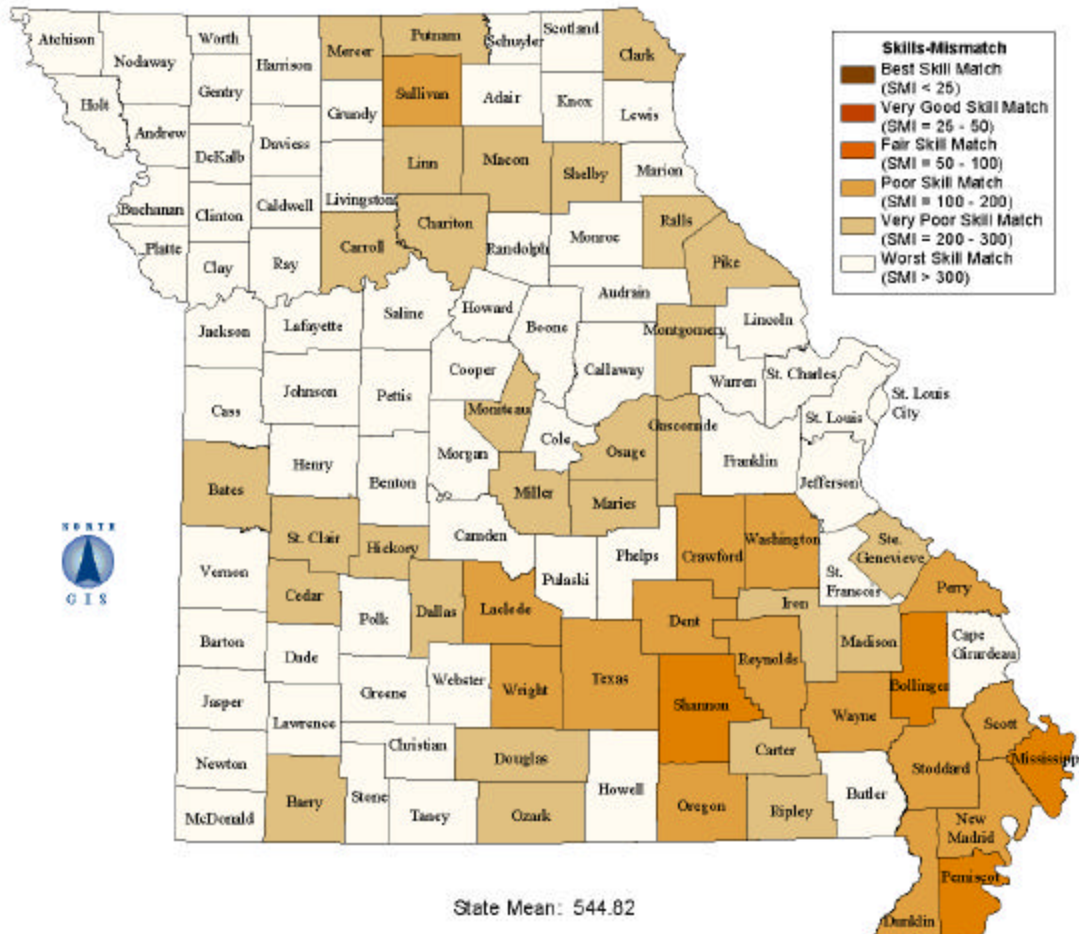


Data from 1994

Source: U.S. Department of Labor
U.S. Census Bureau



Manufacturing Skills - Mismatch Index: SIC26 - Paper and Allied Products

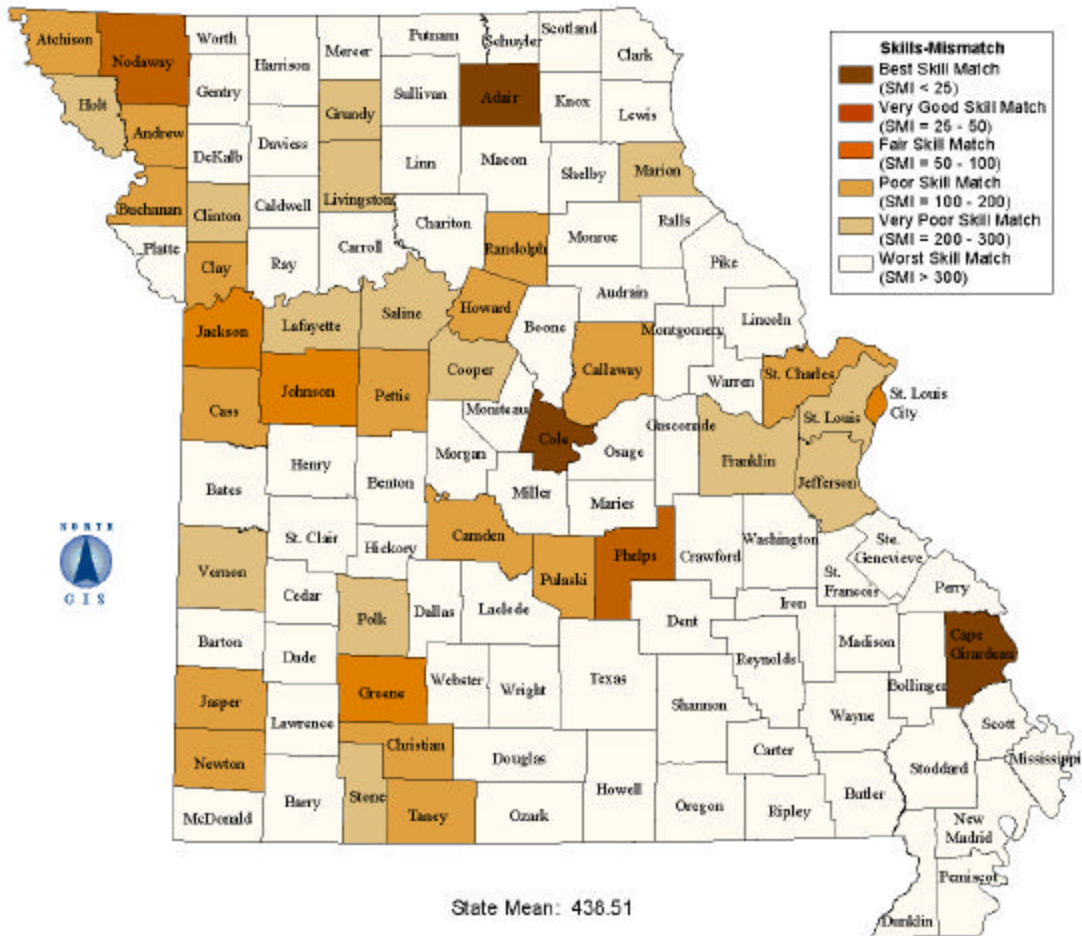


Data from 1994

Source: U.S. Department of Labor
U.S. Census Bureau



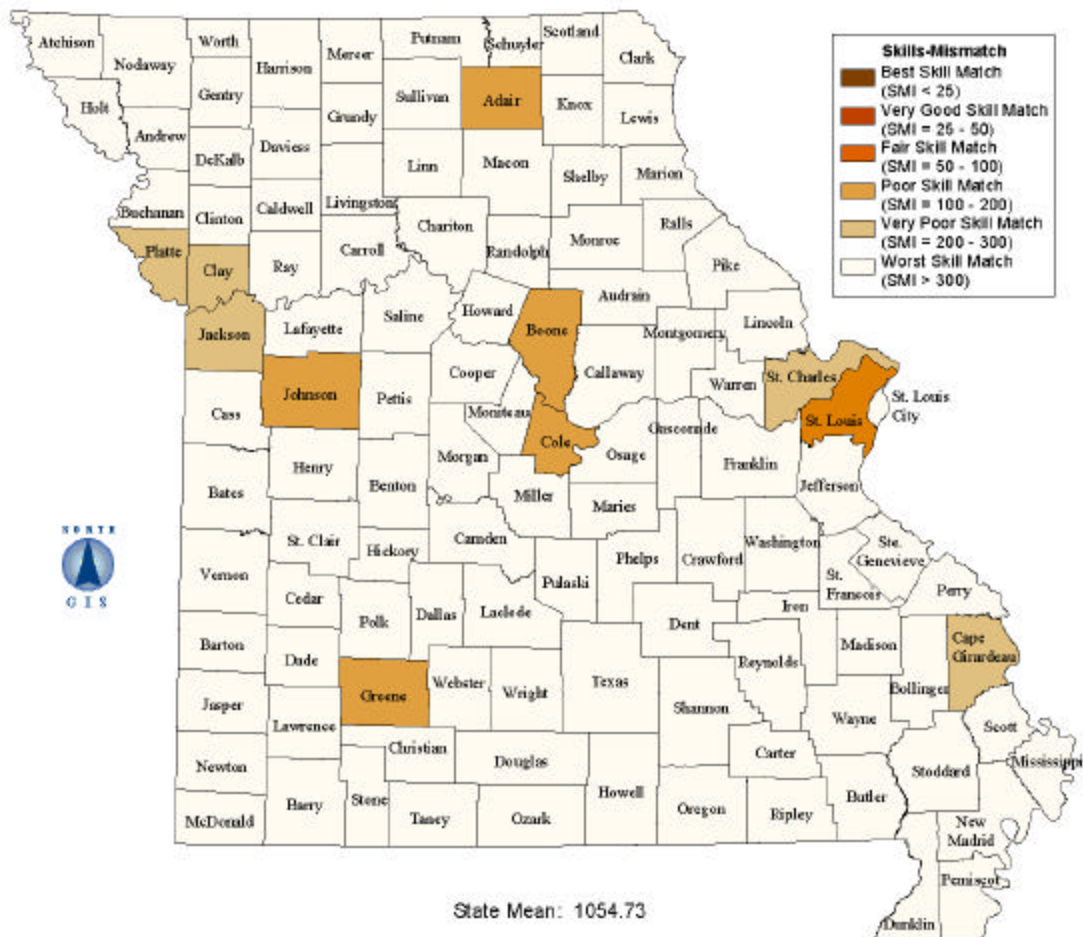
Manufacturing Skills - Mismatch Index:
SIC27 - Printing, Publishing, and Allied Products



Data from 1994

Source: U.S. Department of Labor
U.S. Census Bureau

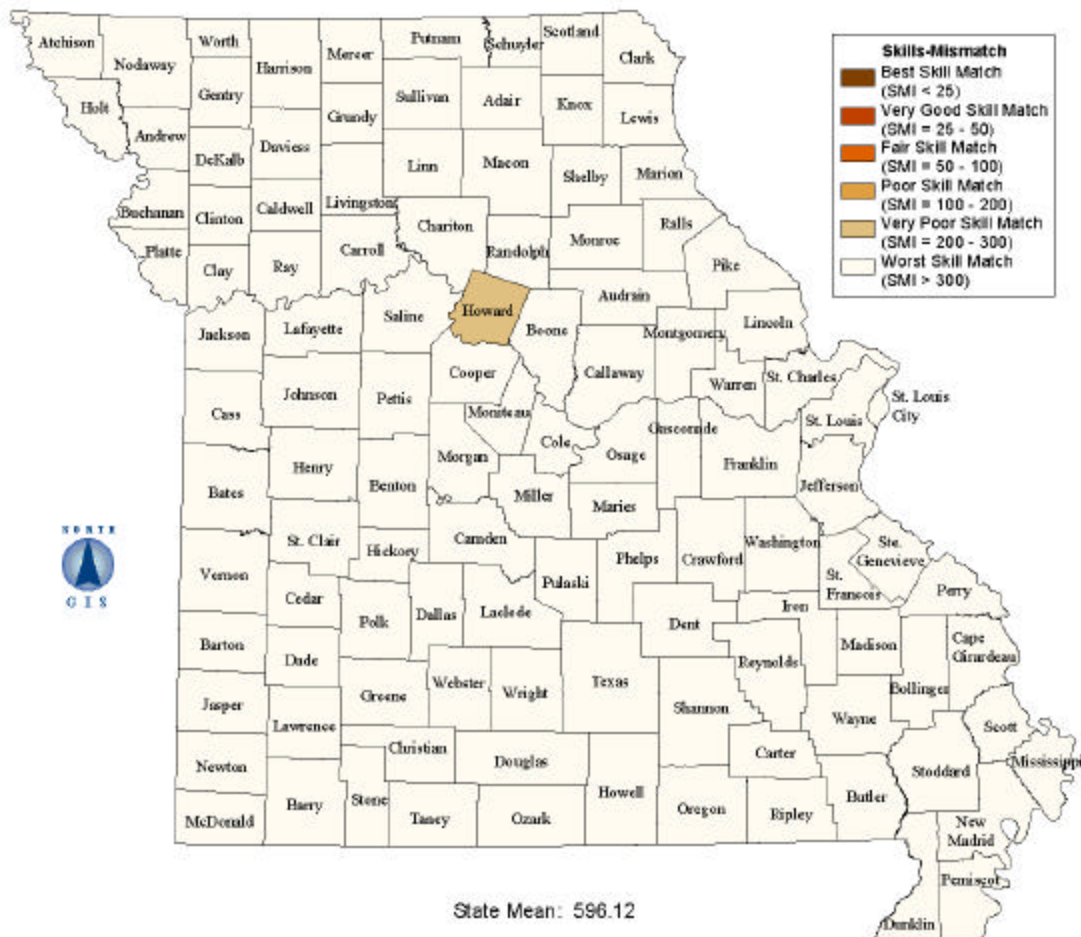
Manufacturing Skills - Mismatch Index: SIC28 - Chemicals and Allied Products



Data from 1994

Source: U.S. Department of Labor
U.S. Census Bureau

Manufacturing Skills - Mismatch Index: SIC29 - Petroleum Refining and Related Industries

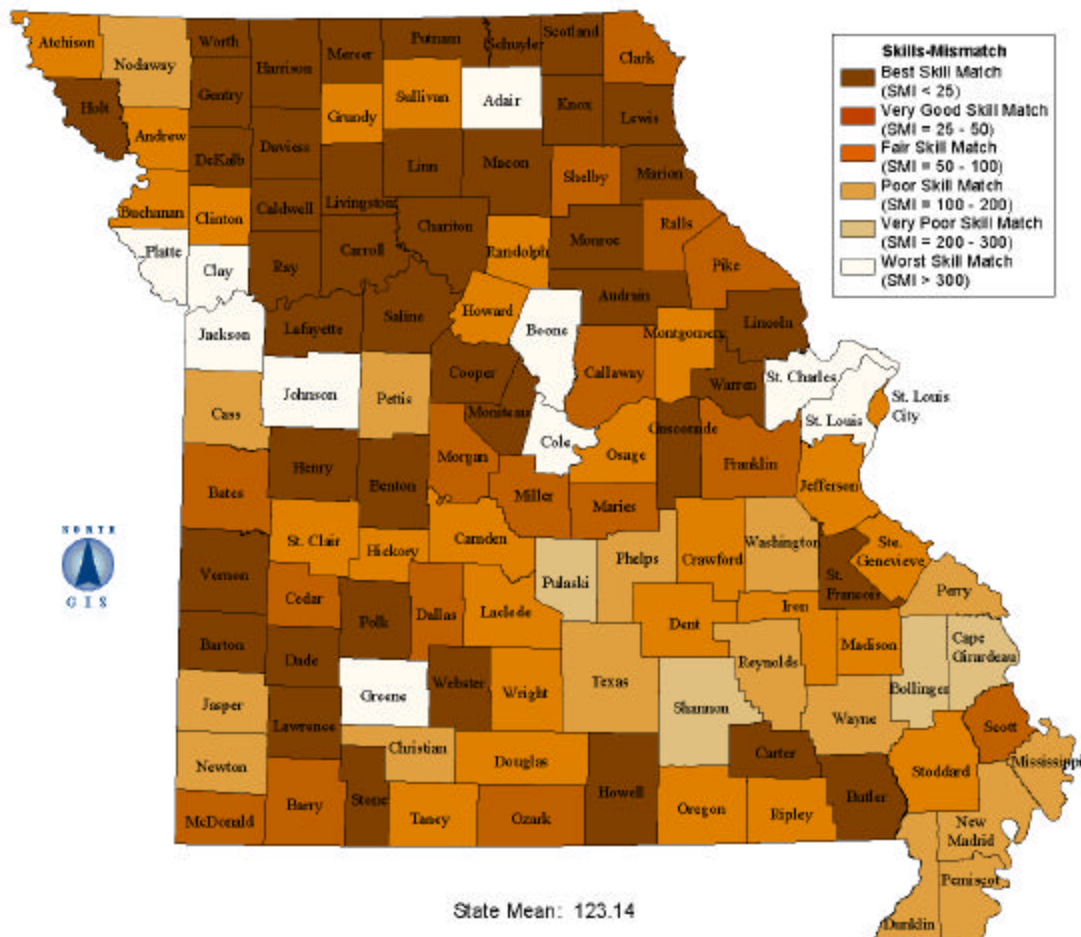


Data from 1994

Source: U.S. Department of Labor
U.S. Census Bureau



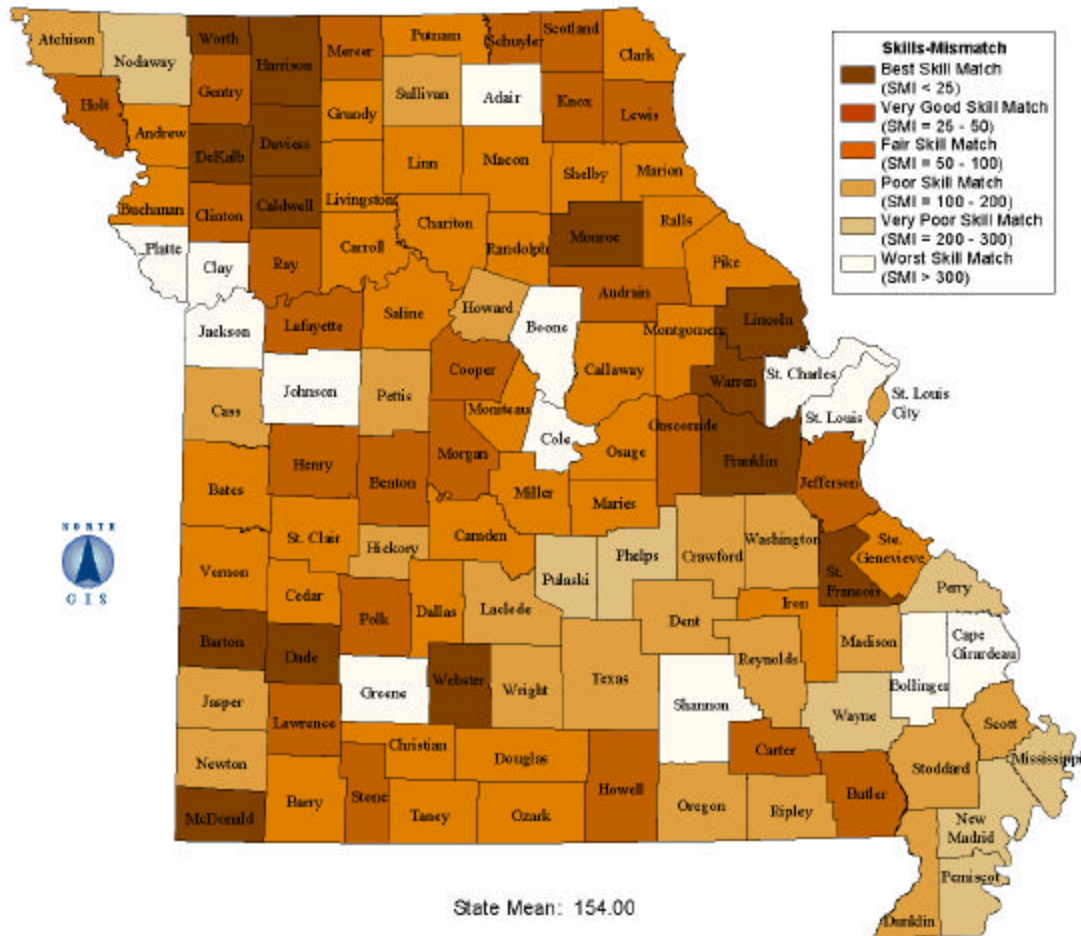
Manufacturing Skills - Mismatch Index: SIC30 - Rubber and Plastics Products



Data from 1994

Source: U.S. Department of Labor
U.S. Census Bureau

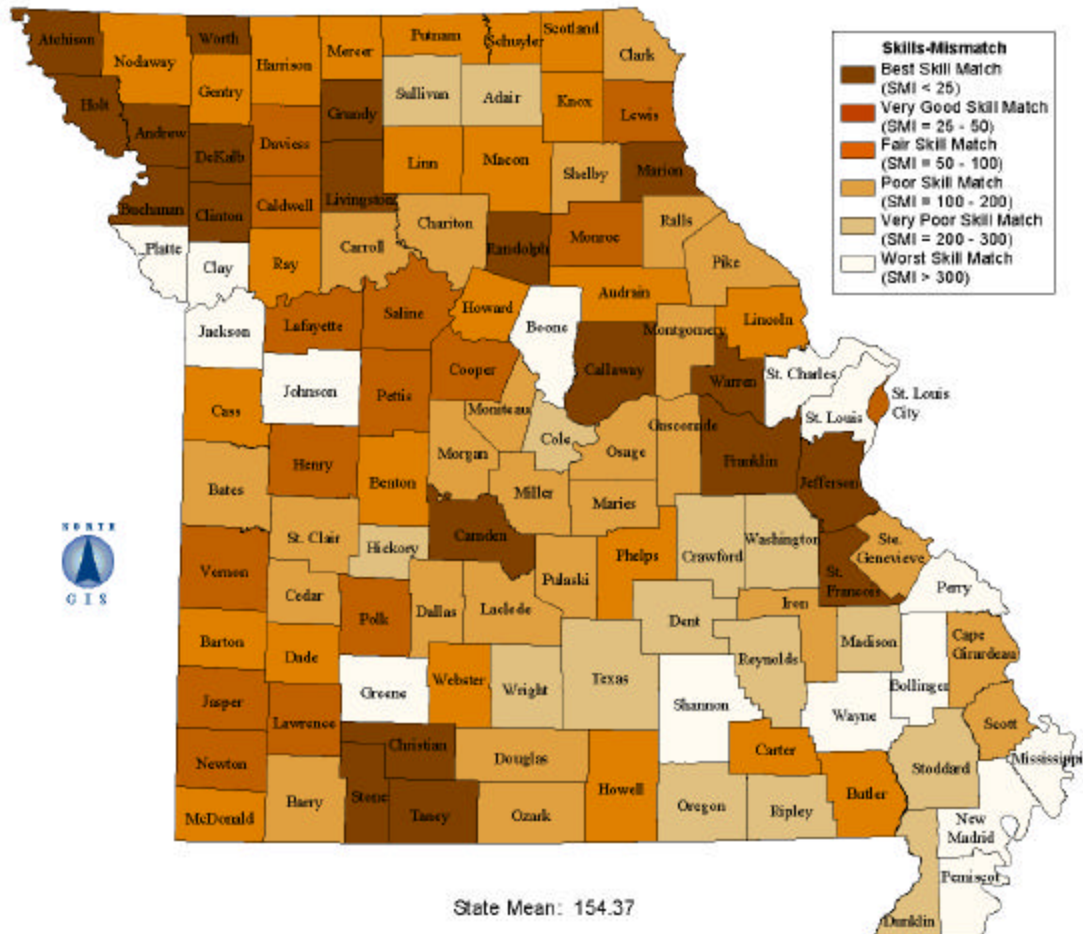
Manufacturing Skills - Mismatch Index: SIC31 - Leather and Related Products



Data from 1994

Source: U.S. Department of Labor
U.S. Census Bureau

Manufacturing Skills - Mismatch Index: SIC32 - Stone, Clay, Glass and Concrete Products

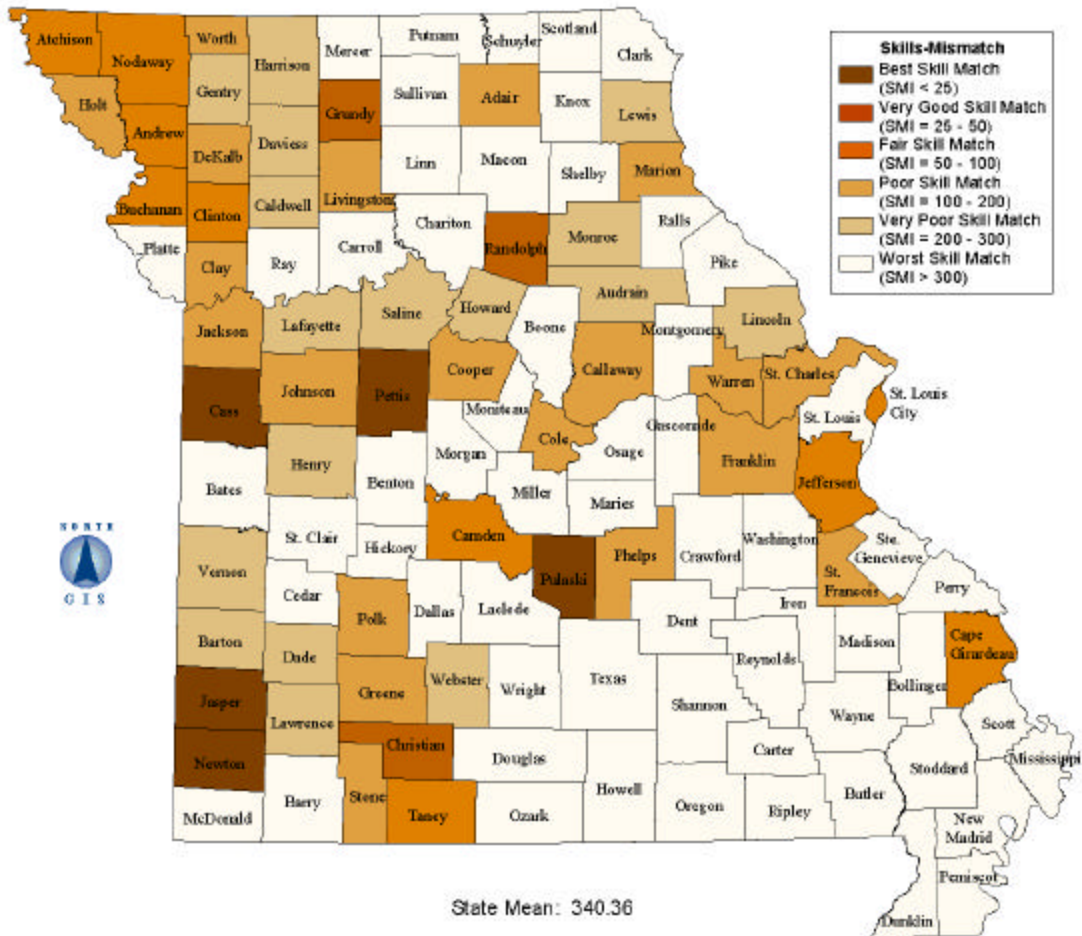


Data from 1994

Source: U.S. Department of Labor
U.S. Census Bureau



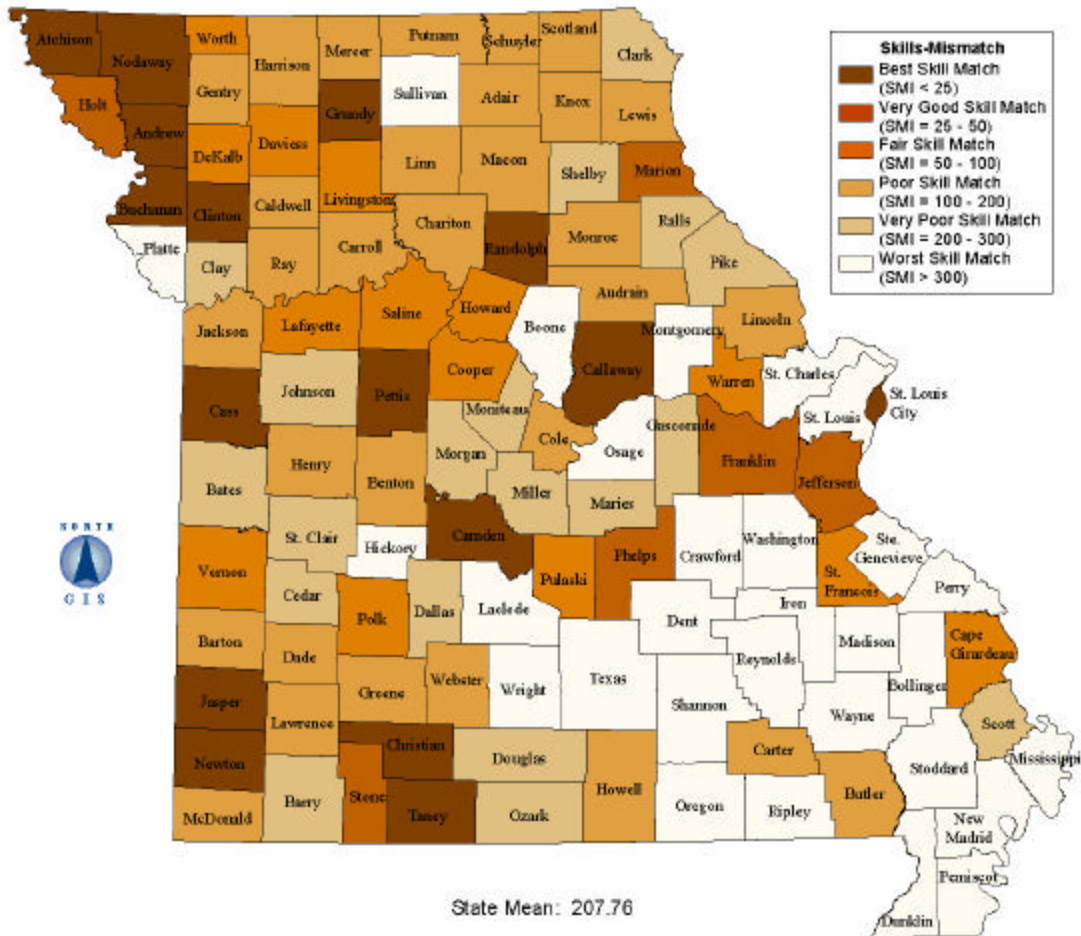
Manufacturing Skills - Mismatch Index: SIC33 - Primary Metal Industries



Data from 1994

Source: U.S. Department of Labor
U.S. Census Bureau

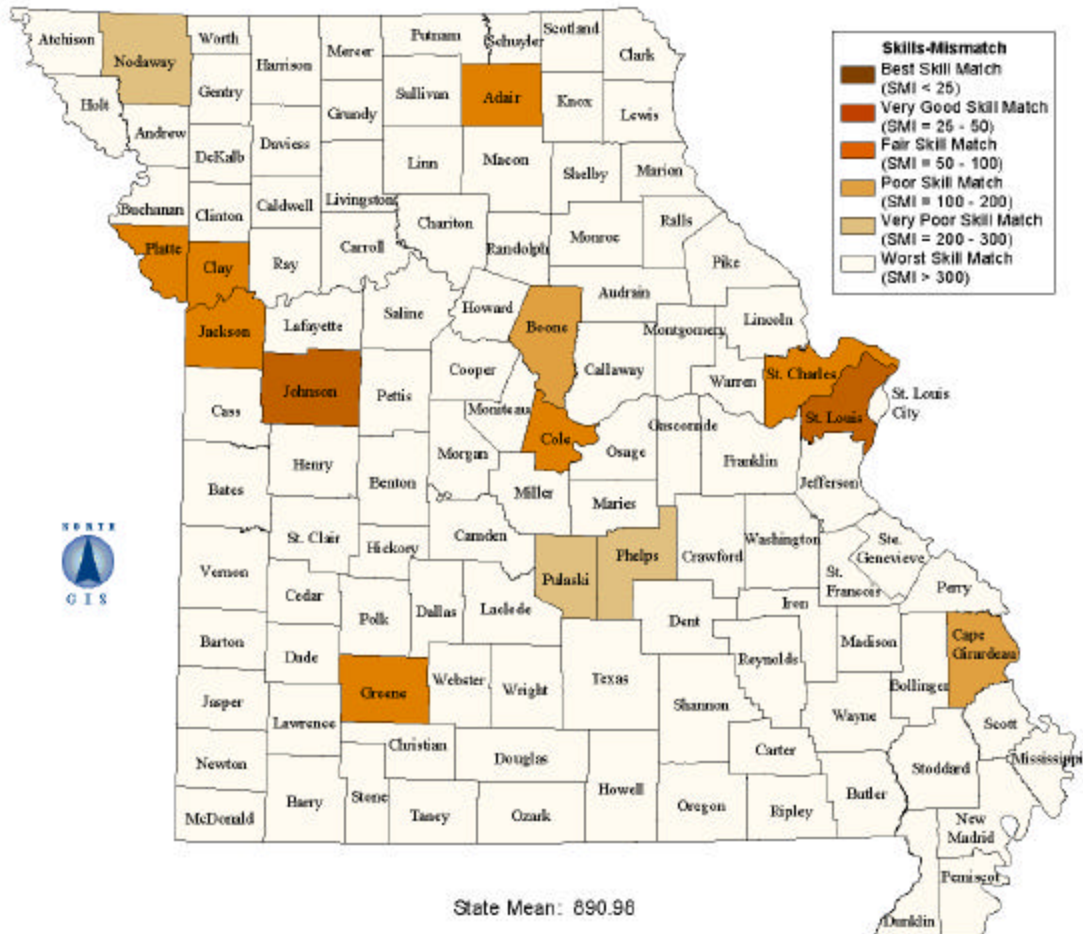
Manufacturing Skills - Mismatch Index:
SIC34 - Fabricated Metal Products,
Except Machinery and Transportation



Data from 1994

Source: U.S. Department of Labor
U.S. Census Bureau

Manufacturing Skills - Mismatch Index: SIC35 - Industrial and Commercial Machinery and Computer Equipment

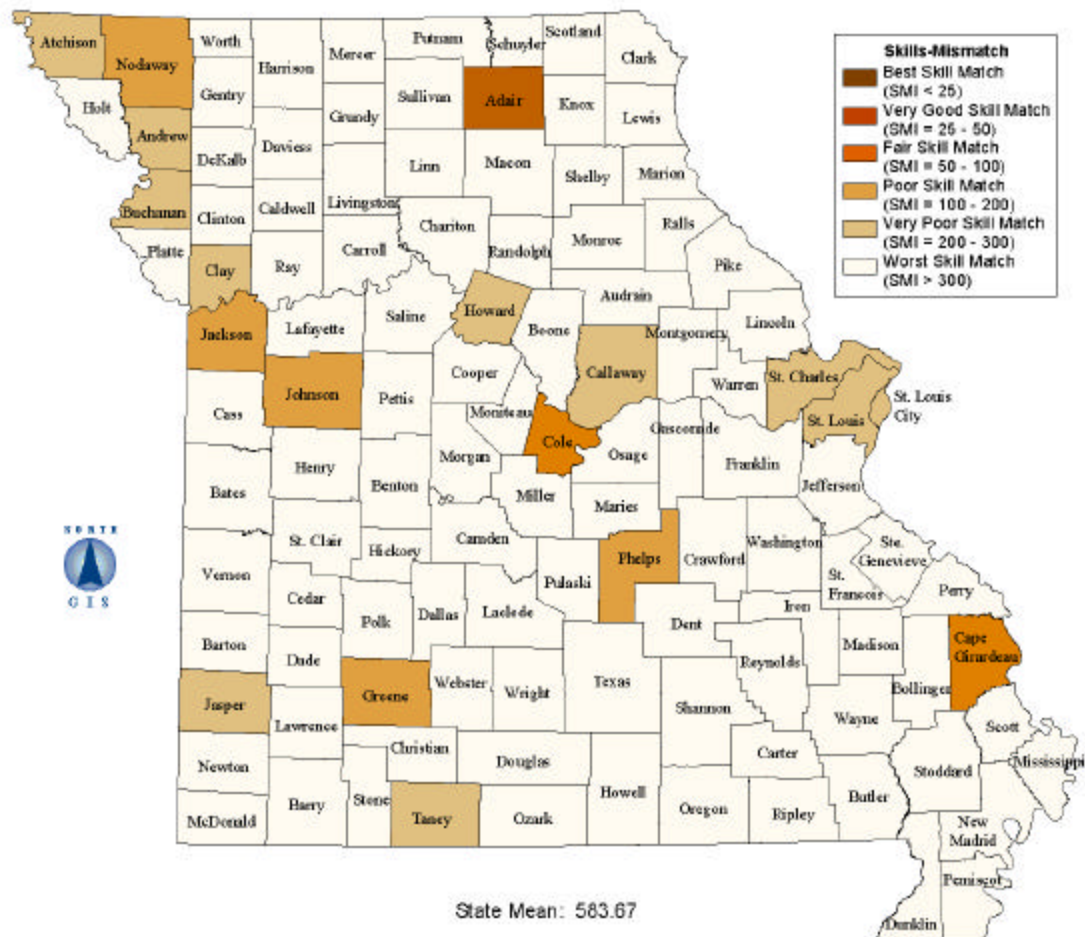


Data from 1994

Source: U.S. Department of Labor
U.S. Census Bureau



Manufacturing Skills - Mismatch Index: SIC36 - Electronic and Electrical Equipment and Components

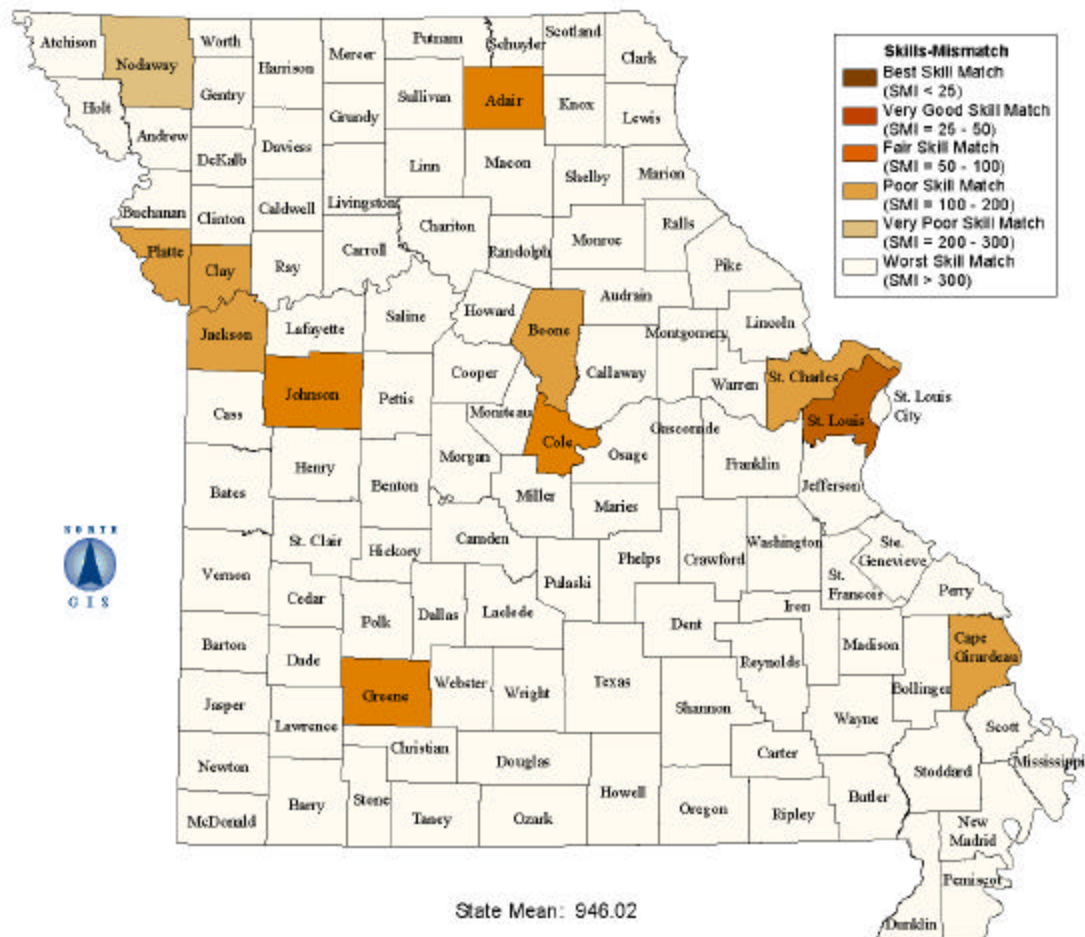


Data from 1994

Source: U.S. Department of Labor
U.S. Census Bureau



Manufacturing Skills - Mismatch Index: SIC37 - Transportation Equipment

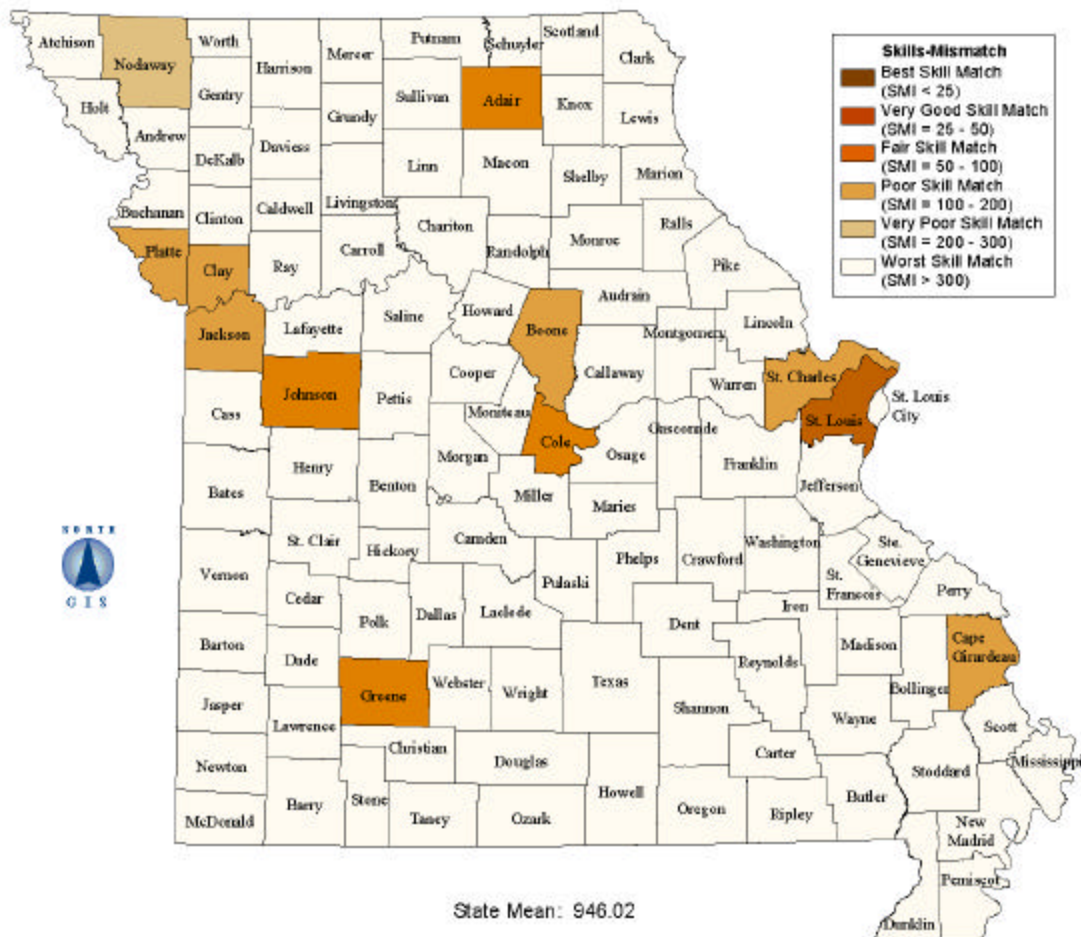


Data from 1994

Source: U.S. Department of Labor
U.S. Census Bureau



Manufacturing Skills - Mismatch Index: SIC38 - Measuring, Analyzing, and Controlling Instruments; Photographic and Optical Goods; Medical Instruments; Watches and Clocks

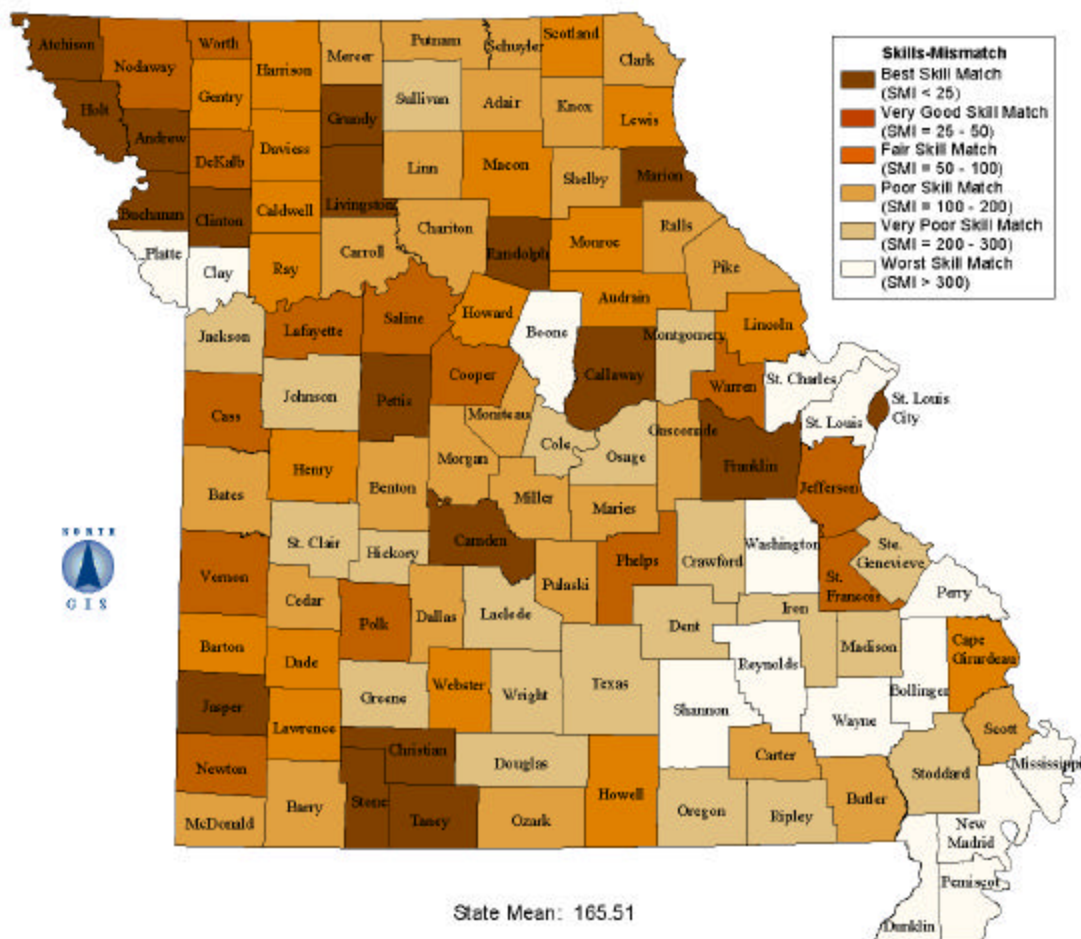


Data from 1994

Source: U.S. Department of Labor
U.S. Census Bureau



Manufacturing Skills - Mismatch Index: SIC39 - Miscellaneous Manufacturing Industries



Data from 1994

Source: U.S. Department of Labor
U.S. Census Bureau



FIPS	SMI20	SMI21	SMI22	SMI23	SMI24	SMI25	SMI26	SMI27	SMI28	SMI29	SMI30	SMI31	SMI32	SMI33	SMI34	SMI35	SMI36	SMI37	SMI38	SMI39
29001	400.10	76.39	665.91	1093.81	361.18	390.88	1241.97	1.86	139.24	636.29	387.98	477.11	265.43	167.51	140.44	78.71	42.58	91.46	91.46	182.92
29003	56.36	200.49	189.57	485.43	44.14	116.31	742.79	127.09	594.49	583.61	66.30	85.29	13.82	64.36	3.38	428.58	273.40	485.80	485.80	1.01
29005	71.82	179.60	215.29	521.20	57.68	122.83	769.45	105.68	547.05	575.10	79.87	104.62	22.14	61.32	2.72	389.72	243.41	443.31	443.31	3.78
29007	22.35	548.05	34.22	165.76	72.92	280.45	346.17	362.75	997.39	425.91	1.96	45.72	57.24	277.99	121.73	846.96	484.95	895.69	895.69	69.57
29009	49.00	750.52	8.09	77.32	118.80	384.84	251.69	540.38	1276.21	481.07	26.08	61.84	119.03	406.58	222.42	1108.90	689.81	1164.56	1164.56	150.21
29011	12.90	602.00	10.66	140.82	55.13	260.41	384.44	449.75	1159.82	561.19	9.60	19.95	59.62	286.15	145.02	964.54	625.48	1032.49	1032.49	90.49
29013	80.74	855.45	16.55	48.95	165.71	466.92	205.78	615.24	1375.36	461.62	48.32	95.09	165.79	489.74	282.16	1218.76	754.30	1269.43	1269.43	199.33
29015	25.39	676.16	3.73	108.20	77.14	304.85	341.91	507.55	1245.21	559.19	17.92	31.02	84.58	337.88	182.38	1051.88	682.53	1119.17	1119.17	119.98
29017	287.94	1379.31	120.00	8.26	431.36	865.37	75.61	1026.81	1911.99	510.29	222.89	302.67	437.60	910.41	613.28	1783.91	1140.66	1820.81	1820.81	486.91
29019	1683.54	514.57	2196.58	2895.84	1572.64	1368.82	2942.89	503.37	103.56	1603.08	1659.57	1827.94	1381.03	966.50	1069.66	174.66	411.39	132.88	132.88	1191.15
29021	60.56	189.85	198.77	502.22	45.04	108.84	786.07	123.18	585.21	600.23	72.70	89.00	14.97	57.85	2.00	417.57	272.15	476.05	476.05	1.85
29023	23.76	647.15	8.79	116.40	77.28	306.89	330.26	469.32	1179.40	511.25	11.08	34.93	77.74	326.34	167.34	1000.47	630.00	1061.64	1061.64	106.47
29025	5.79	554.27	17.58	170.05	37.85	220.76	435.96	423.51	1123.44	597.92	9.82	10.57	44.07	248.31	123.06	918.90	609.26	991.51	991.51	74.99
29027	47.43	248.10	160.19	422.00	51.39	157.71	640.59	140.36	616.30	486.93	44.89	81.03	16.94	101.19	14.77	489.33	268.14	518.00	518.00	2.67
29029	47.44	206.53	178.60	479.61	29.28	89.64	787.94	151.83	646.65	643.75	66.08	68.26	7.47	54.82	3.75	480.59	318.11	526.60	526.60	2.16
29031	295.42	62.61	487.98	880.21	216.95	213.76	1100.92	10.30	259.10	643.63	259.81	313.55	146.89	80.65	57.30	149.62	99.80	183.37	183.37	69.93
29033	55.58	644.92	43.68	132.63	127.63	390.99	255.69	410.71	1045.91	341.69	17.19	87.06	104.00	366.32	176.02	925.27	513.67	960.86	960.86	111.74
29035	36.05	693.16	9.19	97.25	96.77	348.21	289.66	495.42	1211.23	480.63	16.40	49.73	97.08	366.09	191.66	1042.67	645.94	1099.05	1099.05	126.18
29037	133.82	97.18	329.26	723.29	77.13	50.30	1076.69	117.27	542.01	849.26	175.46	153.30	53.79	6.04	14.48	332.37	306.25	409.51	409.51	40.59
29039	69.15	839.13	7.62	52.95	146.81	431.90	237.38	618.82	1393.60	510.72	45.03	78.04	152.87	466.65	271.33	1220.17	774.51	1278.25	1278.25	191.33
29041	52.01	695.31	25.55	102.43	124.84	383.13	247.37	467.54	1146.49	391.86	18.85	76.05	110.92	387.62	197.19	1008.03	588.28	1051.24	1051.24	128.49
29043	74.24	158.65	230.27	568.28	40.30	65.40	895.83	135.48	606.25	725.57	102.94	94.28	18.93	38.57	2.12	408.51	313.07	479.95	479.95	11.45
29045	88.34	830.90	8.72	54.34	146.30	432.08	233.70	607.55	1374.46	496.68	42.73	78.81	150.57	463.00	266.89	1205.13	759.16	1261.44	1261.44	187.12
29047	587.75	9.26	946.65	1536.12	469.35	288.18	1887.64	112.72	231.74	1237.09	640.11	637.66	399.29	142.73	241.20	68.02	254.63	127.10	127.10	329.32
29049	26.64	263.17	137.51	423.77	7.76	71.79	750.98	222.80	785.02	716.40	54.99	36.28	1.64	67.20	19.20	588.80	419.13	647.76	647.76	11.86
29051	432.23	46.03	720.17	1184.64	376.03	308.12	1373.73	9.08	136.47	750.31	433.32	504.41	284.49	190.31	160.39	56.10	69.22	77.81	77.81	203.34
29053	13.05	432.09	59.22	238.28	44.93	219.31	444.84	281.23	871.96	461.29	2.50	37.04	26.24	198.03	70.30	714.37	420.17	766.86	766.86	32.29
29055	103.35	948.85	17.41	28.86	193.64	508.74	197.60	706.45	1514.18	518.03	72.87	111.32	202.61	550.81	336.99	1344.44	858.73	1400.60	1400.60	246.89
29057	12.03	576.16	16.11	150.12	55.16	260.60	378.51	417.46	1103.15	524.34	4.81	23.54	53.95	275.35	132.20	920.24	581.89	983.29	983.29	79.30
29059	54.54	808.79	0.95	66.00	119.46	379.38	294.97	821.64	1415.11	589.99	43.52	55.34	134.71	429.79	254.84	1216.05	802.61	1295.45	1295.45	190.07
29061	1.82	493.89	30.41	202.12	28.29	196.75	464.35	369.28	1035.13	579.48	5.95	10.48	28.82	212.27	95.01	837.51	548.01	907.30	907.30	53.14
29063	0.31	465.24	39.59	232.03	15.73	180.96	526.49	366.94	1037.43	644.96	14.38	3.59	21.47	184.98	85.37	822.35	552.84	899.92	899.92	49.18
29065	108.98	946.86	23.78	30.33	204.09	528.03	175.47	688.83	1477.29	471.66	71.85	122.20	206.84	558.66	338.71	1322.62	826.19	1372.19	1372.19	244.70
29067	81.48	878.16	11.14	43.00	164.32	461.78	218.64	647.29	1431.32	505.68	54.07	90.79	170.67	497.54	293.93	1361.41	759.58	1317.84	1317.84	210.10
29069	186.28	1087.81	52.64	15.29	280.87	648.00	120.47	789.57	1800.51	451.52	115.78	182.96	281.43	677.41	424.16	1483.34	909.89	1504.90	1504.90	520.33
29071	7.77	345.90	86.95	332.16	3.66	102.85	646.80	281.12	892.72	681.81	30.35	14.33	3.28	111.82	41.67	675.79	478.46	754.67	754.67	21.66
29073	36.81	717.39	4.22	89.58	98.01	346.00	298.91	527.55	1266.99	520.99	21.63	45.74	102.31	374.34	203.91	1086.10	690.39	1147.81	1147.81	136.12
29075	16.66	546.51	28.53	164.49	63.31	273.65	362.36	372.42	1020.16	488.67	1.17	36.16	52.06	289.29	119.43	858.72	516.51	912.47	912.47	67.89
29077	494.12	7.92	819.97	1353.76	402.45	279.17	1639.95	52.58	183.37	1011.95	525.55	552.16	325.04	123.47	179.86	51.94	162.87	96.47	96.47	252.12
29079	48.07	225.64	176.57	493.87	13.10	46.10	851.65	214.94	763.91	795.80	84.50	52.67	9.25	43.75	17.75	533.72	424.80	619.04	619.04	19.41
29081	15.37	613.91	9.68	133.86	60.55	272.15	369.94	455.07	1164.82	540.36	9.68	23.42	64.08	296.49	160.71	974.36	627.05	1040.59	1040.59	94.49
29083	11.72	513.49	33.10	183.08	52.48	249.36	392.13	351.39	990.16	474.83	0.17	30.62	41.43	244.46	103.87	824.21	498.85	880.05	880.05	96.57
29085	111.82	986.28	18.36	23.67	202.44	519.95	203.95	746.43	1577.03	655.03	84.15	115.88	216.52	572.07	367.31	1397.86	908.11	1458.05	1458.05	264.94
29087	18.18	346.43	92.93	309.85	36.01	177.32	631.08	219.72	768.42	487.93	13.78	44.23	12.99	146.36	38.82	608.37	389.82	662.86	662.86	12.41
29089	100.64	369.63	182.78	376.08	144.31	332.19	465.25	162.44	596.77	276.37	59.04	156.75	85.40	233.98	83.56	523.30	217.78	539.42	539.42	53.29
29091	18.55	820.19	10.72	128.66	67.78	267.49	349.75	450.67	1152.97	519.28	8.42	29.46	68.08	306.13	163.72	971.41	613.87	1033.72	1033.72	96.93
29093	87.60	910.64	10.24	37.11	170.06	468.63	226.18	684.77	1491.92	543.95	63.45	92.62	181.80	514.92	312.35	1311.62	847.41	1372.51	1372.51	226.57
29095	488.56	3.88	789.16	1320.47	375.51	250.88	1622.27	55.77	208.23	1022.78	504.08	522.24	303.57	105.70	164.84	85.49	177.31	114.91	114.91	295.89
29097	109.44	115.49	289.42	698.99	65.62	86.58	978.10	106.97	536.89	799.63	140.80	133.10	38.39	16.70	4.83	342.45	280.07	412.30	412.30	23.44
29099	32.95	275.47	145.33	443.66	4.46	50.13	812.58	262.50	853.68	814.11	73.32	33.81	8.88	54.10	32.10	611.49	484.52	701.84	701.84	27.43
29101	537.96	12.41	875.26	1421.39	443.14	311.24	1702.06	59.45	164.73	1039.25	568.80	599.30	361.07	145.94	206.67	39.93	163.07	81.70	81.70	283.00
29103	27.21	676.14	5.08	105.84	81.92	315.28	326.72	499.09	1227.84	532.89	16.04	35.54	86.21	342.60	182.17	1042.51	666.17	1106.29	1106.29	118.94
29105	98.70	916.33	20.05	35.79	190.15	505.66	186.37	665.16	1445.58	470.79	63.57	111.94	192.43	534.82	317.48	128				

FIPS	SMI20	SMI21	SMI22	SMI23	SMI24	SMI25	SMI26	SMI27	SMI28	SMI29	SMI30	SMI31	SMI32	SMI33	SMI34	SMI35	SMI36	SMI37	SMI38	SMI39
29117	21.49	392.99	84.23	290.66	49.26	212.01	477.14	234.26	786.46	441.20	9.19	50.71	23.30	175.85	53.64	639.79	362.24	697.71	697.71	21.42
29119	25.27	687.54	2.62	113.62	70.60	286.52	378.67	538.43	1301.79	628.64	26.68	23.91	86.33	334.80	190.14	1088.37	733.30	1164.44	1164.44	128.94
29121	39.88	597.45	39.39	147.67	102.61	345.81	293.70	383.82	1015.26	372.30	8.83	68.46	81.62	324.87	149.26	883.21	497.95	923.94	923.94	90.47
29123	102.77	956.08	15.63	38.26	191.20	503.11	207.57	718.85	1536.95	541.43	75.26	100.20	203.24	550.90	398.30	1380.12	878.15	1419.37	1419.37	249.28
29125	51.21	763.54	7.19	73.23	121.73	389.66	259.69	553.14	1296.33	489.06	28.68	63.03	123.37	414.48	229.37	1126.85	704.74	1183.42	1183.42	156.08
29127	26.09	336.27	105.02	323.02	45.79	189.61	528.29	201.53	730.27	499.03	17.41	56.37	17.50	147.62	37.59	582.48	330.46	631.09	631.09	11.97
29129	35.66	708.86	6.08	92.27	96.61	343.67	299.13	518.50	1262.29	513.62	19.90	45.48	99.70	389.62	199.42	1073.61	679.17	1134.32	1134.32	132.28
29131	59.48	810.13	4.73	60.60	131.80	405.84	257.39	600.90	1372.09	524.63	39.22	67.04	139.17	441.97	254.72	1193.01	762.11	1253.65	1253.65	177.89
29133	228.11	1247.34	83.75	5.79	357.71	760.25	95.55	923.36	1779.75	491.00	171.09	242.50	363.02	801.31	525.42	1643.92	1042.65	1684.51	1684.51	409.14
29135	44.09	726.39	9.01	85.36	111.57	371.90	270.06	519.56	1244.86	474.92	21.70	57.91	110.27	360.26	209.50	1078.87	667.62	1134.02	1134.02	139.53
29137	2.42	517.76	25.28	194.29	27.38	194.37	473.65	401.25	1090.74	619.78	11.02	6.39	33.88	221.37	107.11	880.78	592.24	955.90	955.90	63.92
29139	88.34	892.04	14.92	40.09	175.00	480.32	203.68	651.82	1432.33	486.90	57.25	99.73	178.11	512.29	302.56	1389.27	797.36	1322.66	1322.66	216.94
29141	34.89	726.05	1.08	91.11	91.15	330.17	325.36	551.49	1312.18	574.48	26.73	38.17	102.16	370.91	208.85	1115.19	730.22	1183.93	1183.93	141.86
29143	205.90	1208.13	68.19	3.63	328.01	714.86	116.49	905.21	1764.67	518.77	155.88	216.53	337.30	762.83	498.74	1616.18	1034.86	1662.39	1662.39	366.15
29145	122.10	114.34	310.25	700.00	64.26	37.01	1071.46	142.20	594.26	880.13	168.40	136.32	47.60	5.67	16.63	371.20	344.53	454.12	454.12	40.88
29147	165.95	108.61	366.17	708.44	142.56	179.27	917.48	39.84	568.32	565.04	166.01	215.85	83.76	70.75	23.84	238.59	133.90	276.31	276.31	40.68
29149	132.41	1010.33	34.00	21.25	235.60	577.79	152.31	736.48	1538.80	488.93	90.34	146.26	238.48	809.94	374.56	1389.42	888.73	1436.51	1436.51	277.81
29151	92.40	919.11	13.12	34.68	178.28	483.55	211.97	684.67	1486.59	523.62	64.85	99.71	187.58	525.57	317.59	1313.20	840.50	1371.04	1371.04	230.45
29153	88.01	826.26	9.95	55.42	146.23	432.25	231.94	802.00	1364.56	489.73	41.68	79.27	149.90	461.26	264.44	1197.69	751.56	1253.11	1253.11	165.10
29155	234.47	1270.38	85.57	3.74	364.42	768.68	99.85	948.10	1817.77	513.07	178.95	246.64	372.63	815.49	539.39	1676.69	1072.65	1719.52	1719.52	421.70
29157	290.06	1312.55	93.30	2.54	382.56	793.47	100.67	967.50	1873.35	536.11	194.58	260.35	393.52	846.05	566.31	1728.84	1115.52	1773.07	1773.07	445.75
29159	94.42	134.30	266.45	628.20	50.56	53.54	963.21	131.30	888.99	782.97	129.70	112.98	28.93	16.60	5.54	383.04	316.87	458.26	458.26	21.56
29161	155.47	173.62	318.10	622.51	155.63	242.96	771.29	46.11	376.03	432.14	136.43	213.40	89.21	123.21	39.11	286.88	116.19	310.87	310.87	42.42
29163	83.35	725.52	29.89	94.91	142.07	423.02	224.78	484.56	1164.88	372.60	25.42	89.40	126.25	414.70	214.97	1034.08	597.81	1073.84	1073.84	142.88
29165	1155.89	165.70	1638.25	2372.93	992.97	689.16	2713.44	325.98	206.82	1734.16	1213.60	1230.86	885.19	472.80	636.77	83.86	426.36	126.64	126.64	770.22
29167	17.45	415.88	69.10	252.48	49.23	222.12	449.86	262.00	895.52	443.35	4.85	44.44	26.63	193.19	65.16	885.24	393.65	734.60	734.60	28.78
29169	226.41	60.55	466.99	928.76	138.97	44.12	1346.68	144.60	536.26	1067.17	289.49	240.00	119.63	2.88	69.22	297.93	361.51	388.17	388.17	106.36
29171	36.90	699.41	8.49	94.94	99.97	350.46	288.30	501.54	1221.03	484.27	17.44	50.06	98.99	388.78	194.86	1051.39	653.15	1108.22	1108.22	127.86
29173	67.46	830.08	7.96	54.51	144.69	429.05	237.08	609.25	1378.38	502.83	42.78	77.26	149.74	461.41	266.32	1207.05	762.83	1264.24	1264.24	186.96
29175	42.31	222.11	170.82	480.95	15.01	59.08	815.31	195.87	730.95	742.42	74.09	63.53	5.95	47.20	11.86	514.69	382.06	593.89	593.89	11.65
29177	16.95	619.97	9.47	130.19	63.96	279.43	360.91	456.78	1165.75	538.76	9.59	25.83	66.62	302.36	163.63	978.21	625.90	1043.14	1043.14	96.47
29179	174.86	1142.87	49.63	5.97	287.16	662.77	141.97	958.31	1714.31	532.45	132.36	182.71	298.88	703.70	455.22	1554.46	1001.18	1605.80	1605.80	348.55
29181	103.16	967.60	13.97	28.26	188.73	496.79	224.29	740.00	1574.84	579.44	80.27	104.57	205.62	552.65	345.98	1386.88	910.34	1450.77	1450.77	256.03
29183	682.80	24.58	1065.32	1681.56	556.75	356.67	2027.02	136.37	206.84	1309.83	735.06	738.37	478.48	192.89	302.26	53.42	267.86	108.29	108.29	399.03
29185	81.60	870.00	13.06	44.89	165.89	465.05	211.65	834.39	1408.31	485.54	51.79	93.16	188.26	495.56	289.71	1244.52	780.61	1298.29	1298.29	206.12
29186	85.95	894.94	11.92	39.43	170.13	470.97	215.37	662.36	1463.49	512.21	58.38	94.52	177.60	509.14	303.59	1282.38	815.87	1339.29	1339.29	218.38
29187	0.22	438.24	46.32	242.82	16.67	162.20	520.63	332.83	977.97	605.60	10.01	8.71	16.23	174.26	72.38	775.28	516.40	847.51	847.51	37.94
29189	1152.51	200.19	1612.37	2295.83	1028.35	812.41	2487.07	259.92	76.56	1432.21	1188.90	1263.62	891.30	534.77	634.66	35.54	279.41	42.17	42.17	753.53
29191	22.45	475.77	55.89	212.40	65.61	264.14	389.20	299.34	891.08	409.89	2.52	50.57	42.91	236.76	91.15	748.84	423.22	794.45	794.45	46.81
29193	32.78	701.95	4.08	95.67	91.15	332.92	311.11	518.04	1254.84	528.93	19.59	41.08	95.89	361.72	195.68	1071.15	683.55	1134.13	1134.13	129.69
29195	17.44	620.00	9.85	129.64	65.20	282.08	357.15	454.70	1161.45	532.23	9.16	27.00	67.07	303.58	153.62	975.90	621.85	1039.96	1039.96	96.25
29201	80.03	819.98	23.55	61.91	166.53	467.52	196.43	570.04	1296.93	408.29	41.84	100.83	158.43	475.56	264.70	1156.84	692.68	1200.39	1200.39	184.06
29203	292.23	1408.49	118.20	4.49	433.28	864.29	93.47	1089.66	1980.88	564.62	232.94	301.34	446.78	923.18	630.54	1837.23	1196.79	1880.78	1880.78	502.96
29205	44.93	748.75	4.60	78.47	111.03	370.01	278.78	549.15	1296.12	512.15	26.63	54.39	115.20	388.89	220.88	1118.82	708.46	1178.85	1178.85	149.70
29207	139.07	1014.15	59.19	22.73	244.21	582.05	140.95	731.86	1525.27	446.47	82.30	164.62	243.94	618.49	378.18	1383.88	866.21	1427.47	1427.47	260.61
29209	12.00	324.02	95.28	333.67	16.67	131.33	600.63	230.91	798.57	579.35	21.25	29.68	2.94	115.50	30.30	612.93	397.25	678.16	678.16	9.44
29211	109.24	971.97	18.65	25.30	200.62	518.85	197.08	728.16	1546.94	532.60	79.34	115.67	211.70	565.24	349.99	1373.94	863.72	1431.47	1431.47	257.27
29213	62.61	207.91	193.13	479.04	57.31	142.24	708.67	115.40	866.43	529.39	64.32	97.01	20.61	79.87	7.36	417.42	245.02	467.21	467.21	2.58
29215	140.73	1050.53	33.85	14.51	244.00	588.35	180.04	781.54	1610.86	512.40	102.22	149.88	252.98	632.47	397.64	1448.80	925.23	1501.81	1501.81	298.41
29217	33.04	434.82	80.88	249.95	74.55	266.61	409.51	254.71	806.89	377.07	9.17	67.52	43.42	222.46	78.46	679.45	363.81	718.76	718.76	36.64
29219	0.68	461.84	38.94	223.95	21.92	178.45	492.75	346.67	999.34	589.00	7.26	9.61	21.36	191.05	81.59	800.24	526.76	870.80	870.80	43.76
29221	156.59	1113.44	37.29	8.64	259.66	806.61	176.79	852.47	1721.93	582.83	123.68	158.54	277.94	688.92	435.42	1543.36	1013.81	1602.97	1602.97	332.62
29223	220.36	1258.90	73.09	0.76	343.02	733.29	127													

FIPS	County	FIPS	County	FIPS	County
29001	Adair	29077	Greene	29153	Ozark
29003	Andrew	29079	Grundy	29155	Pemiscot
29005	Atchison	29081	Harrison	29157	Perry
29007	Audrain	29083	Henry	29159	Pettis
29009	Barry	29085	Hickory	29161	Phelps
29011	Barton	29087	Holt	29163	Pike
29013	Bates	29089	Howard	29165	Platte
29015	Benton	29091	Howell	29167	Polk
29017	Bollinger	29093	Iron	29169	Pulaski
29019	Boone	29095	Jackson	29171	Putnam
29021	Buchanan	29097	Jasper	29173	Ralls
29023	Butler	29099	Jefferson	29175	Randolph
29025	Caldwell	29101	Johnson	29177	Ray
29027	Callaway	29103	Knox	29179	Reynolds
29029	Camden	29105	Laclede	29181	Ripley
29031	Cape Girardeau	29107	Lafayette	29183	St. Charles
29033	Carroll	29109	Lawrence	29185	St. Clair
29035	Carter	29111	Lewis	29186	Ste. Genevieve
29037	Cass	29113	Lincoln	29187	St. Francois
29039	Cedar	29115	Linn	29189	St. Louis
29041	Chariton	29117	Livingston	29195	Saline
29043	Christian	29119	McDonald	29197	Schuyler
29045	Clark	29121	Macon	29199	Scotland
29047	Clay	29123	Madison	29201	Scott
29049	Clinton	29125	Maries	29203	Shannon
29051	Cole	29127	Marion	29205	Shelby
29053	Cooper	29129	Mercer	29207	Stoddard
29055	Crawford	29131	Miller	29209	Stone
29057	Dade	29133	Mississippi	29211	Sullivan
29059	Dallas	29135	Moniteau	29213	Taney
29061	Daviess	29137	Monroe	29215	Texas
29063	De Kalb	29139	Montgomery	29217	Vernon
29065	Dent	29141	Morgan	29219	Warren
29067	Douglas	29143	New Madrid	29221	Washington
29069	Dunklin	29145	Newton	29223	Wayne
29071	Franklin	29147	Nodaway	29225	Webster
29073	Gasconade	29149	Oregon	29227	Worth
29075	Gentry	29151	Osage	29229	Wright
				29510	St. Louis City

III. Appendix

Industry Skill Demand

SIC	Percent of Employees		
	<i>High-Skilled</i>	<i>Semi-Skilled</i>	<i>Low-Skilled</i>
20	8.75	20.62	70.63
21	18.53	28.10	53.37
22	6.36	17.65	75.99
23	5.24	11.89	82.87
24	8.12	23.69	68.19
25	7.51	30.14	62.35
26	12.33	2.94	84.73
27	21.82	20.85	57.33
28	31.67	19.56	48.77
29	25.29	2.01	72.70
30	10.61	17.86	71.53
31	6.77	22.02	71.21
32	10.61	22.24	67.15
33	12.29	27.78	59.93
34	13.54	22.88	63.58
35	26.53	24.41	49.06
36	26.93	16.08	56.99
37	28.75	22.25	49.00
38	28.75	22.25	49.00
39	12.99	21.30	65.71

Source: Occupational Employment Survey, U.S. Department of Labor

Analysis and reporting by David J. Peters, Planner.
Maps by Zachary Johnson, GIS Analyst.

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